The listing of claims presented below replaces all prior versions and listings of claims in the application.

Listing of Claims

Claims 1-36 (cancel).

37. (Currently amended) An isolated nucleic acid molecule encoding a polypeptide with an antioxidant activity comprising an active fragment of human peroxiredoxin (DELTA.Prx V1hum) of SEQ ID NO:4 wherein said SEQ ID NO:4 has a length of 177 ab ~~having an amino acid sequence of SEQ ID NO:2~~.

38. (Previously presented) An expression vector comprising the isolated nucleic acid molecule of claim 37,

operationally associated with a promoter.

39. (Previously presented) A cell comprising the expression vector of claim 38.

40. (Currently amended) A method for producing a recombinant active fragment of human peroxiredoxin DELTA.Prx V1hum having an amino acid sequence of SEQ ID NO:4, which method comprises: (a) culturing the cell of claim 39 so that the active fragment of human peroxiredoxin DELTA.Prx V1hum is produced by the cell in a culture; and (b) recovering the active fragment of human peroxiredoxin DELTA.Prx.V1 hum from the culture, the cell, or both.

41. (Currently amended) A pharmaceutical composition comprising the active fragment of recombinant human of peroxiredoxin DELTA.Prx.V1 hum of SEQ ID NO:4 ~~of SEQ ID NO: 3~~ and a pharmaceutically acceptable carrier.

42. (Currently amended) The pharmaceutical composition of claim 41, wherein said pharmaceutical composition comprises the fragment of ~~further comprising~~ recombinant human peroxiredoxin DELTA.PRX.VI hum with an antioxidant activity of SEQ ID NO:4, a pharmaceutically acceptable carrier and further comprises recombinant human peroxiredoxin VI with an antioxidant activity of ~~of (SEQ ID NO: 1)~~ SEQ ID NO:2, a dihydrolipoic acid or both.

43. (Previously presented) The pharmaceutical composition according to claim 42, wherein the ratio (w/w) of human peroxiredoxin DELTA.Prx.V1 hum to dihydroliopic acid is from 1:1 to 50:1.

Claim 44. (Previously presented) The pharmaceutical composition according to claim 42, wherein the ratio (w/w) of peroxiredoxin.Prxhum to dihydrolipoic acid is from 1:1 to 50:1.

Claim 45.(Withdrawn) A method for enhancing antioxidant protection in a mammal comprising administering the composition according to claim 41 to the mammal.

Claim 46. (Withdrawn) A method for enhancing antioxidant protection in a mammal comprising administering to the mammal the composition according to claim 41 and another therapeutic agent that is administered to the mammal before, simultaneously with or after the composition according to claim 41.

Claim 47. (Withdrawn) The method according to claim 46 wherein the therapeutic agent is selected from the group consisting of an enzyme that provides additional protection against free radicals in intermolecular space; a low-molecular weight compound that lowers the level of free radicals inside the cell and a combination thereof.

Claim 48. (Withdrawn). The method according to claim 46 wherein the another therapeutic agent is selected from the group consisting of superoxide dismutase, catalase, glutathione peroxidase, tocopherol, glutathione, and ubiquinone and a combination thereof.

Claim 49.(Withdrawn) The method according to claim 45 wherein the composition is administered orally, topically, by passive or active diffusion, spraying, parenteral or endolumbal administration, infusion, inhalation, introduction into a drainage means, sublingually, vaginally, rectally or by drops.

Claim 50.(Withdrawn) A method for enhancing antioxidant protection in a mammal comprising administering the composition according to claim 42 to the mammal.

Claim 51. (Withdrawn ) A method for enhancing antioxidant protection in a mammal comprising administering to the mammal the composition according to claim 42 and another therapeutic agent that is administered to the mammal before, simultaneously with or after the composition according to claim 42.

Claim 52. (Withdrawn) The method according to claim 51 wherein the therapeutic agent is selected from the group consisting of an enzyme that provides additional protection against free radicals in intermolecular space; a low-molecular weight compound that lowers the level of free radicals inside the cell and a combination thereof.

Claim 53. (Withdrawn) The method according to claim 52 wherein the therapeutic agent is selected from the group consisting of superoxide dismutase, catalase, glutathione peroxidase, tocopherol, glutathione, and ubiquinone and a combination thereof.

Claim 54.(Withdrawn) The method according to claim 50 wherein the composition is administered orally, topically, by passive or active diffusion, spraying, parenteral or endolumbal administration, infusion, inhalation, introduction into a drainage means, sublingually, vaginally, rectally or by drops.